

COMPARISON OF ELECTRIC INDUSTRY RESTRUCTURING ACROSS U.S. STATES

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24 States (including D.C.) have enacted electricity restructuring legislation:

Arizona, Arkansas, California, Connecticut, Delaware, District of Columbia, Illinois, Maine, Maryland, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Texas, Virginia, West Virginia

16 States have commission or legislative investigations into deregulation going on

8 States have no activity

In general, the states that have restructured were the same states that had high electricity prices, often due to poor investments in nuclear power.

General References:

**** Most useful for this comparison****

- EIA's Status of State Electric Industry Restructuring Activity
http://www.eia.doe.gov/cneaf/electricity/chg_str/tab5rev.html
- National Association of Regulatory Utility Commissioners (NARUC)
<http://www.naruc.whatsup.net/>

DOE

- EREN Electric Utility Restructuring Page http://www.eren.doe.gov/electricity_restructuring/
- EIA's Electric Power Industry Restructuring and Deregulation
<http://www.eia.doe.gov/cneaf/electricity/page/restructure.html>
- Map of States and Restructuring Status
http://www.eia.doe.gov/cneaf/electricity/chg_str/regmap.html
- International info <http://www.eia.doe.gov/emeu/pgem/electric/contents.html>
- The Changing Structure of the Electric Power Industry 2000: An Update, Oct. 2000
http://www.eia.doe.gov/cneaf/electricity/chg_stru_update/update2000.pdf
- National Conference of State Legislatures (NCSL) <http://www.ncsl.org/programs/esnr/restru.htm>
- National Association of State Energy Officials (NASEO)
http://www.naseo.org/energy_sectors/power/res_info.htm
www.naseo.org/energy_sectors/power/system_benefit.htm
- <http://www.powerexpert.com/deregulation.htm>
- Federal Energy Regulatory Commission (FERC) <http://www.ferc.fed.us>

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	California	Massachusetts	Pennsylvania	New York	Texas
Restructuring Legislation or Order Passed	September 23, 1996 AB 1890	November 19, 1997 HB 5117	December, 1996 HB 1509	May, 1996 By PSC Order 96-12	1995 SB 373 wholesale market, June 1999 SB7 retail market
Competition Begins	March 31, 1998 AB1890 provided for phase-in, but PUC decided to have all retail competition begin at once	March 1, 1998	Phase in of customers to have full competition by Jan 2001 Later got accelerated (?)	Wholesale 1997 Retail 1998 Different phase-in schedule and rules for each utility	Wholesale first Retail by Jan 2002 with phase in
Regional Transmission Organization	CA ISO www.caiso.com Spot market	ISO New England www.iso-ne.com	PJM ISO www.pjm.com	NY ISO www.nyiso.com	ERCOT www.ercot.com
Energy Market	<ul style="list-style-type: none"> ▪ PX www.calpx.com ▪ Day ahead and hour ahead markets ▪ FERC requires UDCs to bid and sell all power through the PX. (No longer term or bilateral contracts) 	<ul style="list-style-type: none"> ▪ ISO New England ▪ Monitored by Division of Energy Resources (DOER) ▪ Day ahead market 	<ul style="list-style-type: none"> ▪ PJM ISO ▪ Monitored by the PUC ▪ Hour ahead, spot market, and Capacity Credit Market (day-ahead and one- or multi-month contracts) 	<ul style="list-style-type: none"> ▪ NY ISO ▪ Self monitored ▪ Day ahead (95% of trading), hour ahead, real time markets 	<ul style="list-style-type: none"> ▪ ERCOT (Electric Reliability Council of Texas) – was one of NERC’s regional reliability councils, became ISO ▪ Day ahead, hour ahead, real time markets
Capacity (GW)	ISO Control Area Capacity: 45 (75% of CA’s demand) Total CA capacity: 55 Peak Demand: 54	ISO New England Peak Demand: 24	PJM Capacity: 56 PJM Peak Demand: 52	Capacity: 35	Capacity: 65 Peak Demand: 58
Retail Choice	<ul style="list-style-type: none"> ▪ Immediate 10% rate reduction, frozen rates until 4/2002 or until stranded costs were paid off ▪ Default provider = UDC ▪ Opt-in aggregation ▪ Switching rates Jan 2000: 14% of load 2% of customers Jan 2001: 11% of load 1.8% of customers ▪ UDC charges fee each time a customer switches 	<ul style="list-style-type: none"> ▪ UDC must provide service at the Standard Offer rate (10% reduction) to all customers who were in the service territory when restructuring started. Also must provide Default Service to others (including people who switched to a competitor and switch back), but not at the Standard Offer rate. ▪ Switching rates: Nov ~ 2% of residential load, <1% of residential customers ▪ Opt-Out Municipal Aggregation - Municipalities 	<ul style="list-style-type: none"> ▪ Most UDCs had a small rate cut only for 1999, and then none after that. (UDCs can’t charge more than PUC rate cap while CTC is in effect.) ▪ PUC mailed an Electric Supplier Selection Form to all consumers, then mailed more info again to consumers who hadn’t switched. ▪ Switching rates: 1999 28% of load ▪ Most active retail market 	<ul style="list-style-type: none"> ▪ Most UDCs had a 5-10% rate cut. ▪ Starting 5/2000 no fixed rates through utilities (they pass on market rates) – had rates 40% higher than last year. ▪ Recently utilities started giving incentives to customers to switch to a competitive provider, has helped increase switching rates 	<ul style="list-style-type: none"> ▪ Rates frozen for 3 years until markets are opened to retail competition, then 6% reduction for next 5 years ▪ Default is UDC, but Provider of Last Resort is different. Provider of last resort will be required to provide to consumers no longer served by their provider of choice with service at a fixed price. A competitive bidding

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	to a competitor.	are allowed to aggregate their residents and be competitive suppliers & administer their customers' share of DSM money. Residents may opt-out. (A muni aggregator is not the same as a muni utility.)		<ul style="list-style-type: none"> Switching rates Nov 2000: 3.5% of customers 11% of load 	process will designate the last resort providers for each consumer class.
Stranded Assets / Transition Costs	Non-bypassable charge to ratepayers. Amount determined by PUC.	Full recovery through non-bypassable charge to ratepayers.	Non-bypassable charge to ratepayers. Amount determined by PUC.	Non-bypassable charge to ratepayers. Amount determined by PUC.	Full recovery through non-bypassable charge to ratepayers.
Divestiture	PUC required UDCs to voluntarily divest themselves of at least 50% of their fossil generating assets, and gave them financial incentives to divest. PG&E and SCE sold all fossil generating assets.	UDCs sold off most (~90%) of plants, including some nuclear.	Not required. Proceeds of sale applied to stranded costs. Many power plants sold.	Utilities are selling most of their plants.	Not required. However, no entity can own more than 20% of the installed generation capacity located in or capable of delivering electricity to a region.
Renewables	<ul style="list-style-type: none"> No RPS \$540 million per year collected through non-bypassable system benefits charge (Public Purpose Programs charge on the bill), to fund R&D and renewable generation in CA. Programs administered by the CEC. 	<ul style="list-style-type: none"> RPS – 1% of sales from <i>new</i> renewables by 2003, increasing ½% each year after) Massachusetts Renewable Energy Trust Fund funded by a Renewables Charge on the bill, ~\$40 million / year until 2002. 	<ul style="list-style-type: none"> RPS – minimum 2% of generation from renewables, increasing ½% each year) Charge on bill to go into each UDC's Sustainable Energy Fund (?) 	<ul style="list-style-type: none"> No RPS RD&D funded by non-bypassable system benefits charge (~\$70 million / year for all SBC programs, first three years) Administered by the NYSERDA. 	<ul style="list-style-type: none"> RPS - requires that the state have an additional 2,000MW of generating capacity from renewable technologies by January 1, 2009
DSM	Funds collected through the non-bypassable system benefits charge (Public Purpose Programs charge on the bill). Programs overseen by the CPUC, administered by the UDCs. Funding must be >\$228 million / year	Funded by DSM Charge on bill until 2002, ~\$150 million / year, programs overseen by Division of Energy Resources (DOER), carried out by UDC, or municipal aggregator.	PUC required to ensure energy conservation activities are appropriately funded and available in each electric distribution territory. Funded by non-bypassable charge (might only be for low income?)	Funded by non-bypassable system benefits charge, DSM gets ~\$40 million / year, for the first three years)	Each UDC required to reduce consumption by a min. of 10% of the utility's annual demand growth by Jan '04. Utilities should use third party contracting; utilities can apply to the PUC for cost-recovery.

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Low Income	Funds collected through the non-bypassable system benefits charge (Public Purpose Programs charge on the bill) Programs overseen by the CPUC	Low income customers get a discount on the distribution and transition charges	PUC required to ensure that universal service activities are appropriately funded and available in each electric distribution territory Funded by non-bypassable charge	Funded by non-bypassable system benefits charge (~\$70 million / year for all SBC programs, first three years)	Rules set up by the PUC, funded by the system benefit fund.
Green Power Market	Active, though shutting down now due to crisis	Not active (?)	Active	Not active (?)	Not yet active
Comments	<ul style="list-style-type: none"> Only state with PX separate from ISO. California is the first state in the nation to offer large-scale retail choice and a competitive generation market Low default rate has prevented competition 	<ul style="list-style-type: none"> Differentiating between Standard Offer and Default Service is an extra impediment to competition. RPS hasn't started yet Low default rate has prevented competition Also been having problems with rates capped below wholesale prices. 	Phase in and telling each customer to choose a supplier helped competition.	<ul style="list-style-type: none"> NY has a large Public Power Authority Also been having tight supply and increasing demand... starting to rethink rules for the ISO 	<ul style="list-style-type: none"> Retail competition has not begun yet. PUC is generally taking a slower and more cautious route to implementation
References	PUC www.cpuc.ca.gov/staticelectric/electric_restructuring/er_home_page.htm PUC Data on number who have switched suppliers http://www.cpuc.ca.gov/staticelectric/Direct_Access/DASR.htm CEC www.energy.ca.gov/electricity/index.html	*DOER: http://www.state.ma.us/doer/utility/utility.htm DTE: www.magnet.state.ma.us/dpu , DTE Order finalizing regulations under restructuring http://www.state.ma.us/dpu/restructuring/96-100/cmr11-2.pdf	PUC http://puc.paonline.com/electric/elect_comp.asp Power Point Presentation comparing CA and Penn. http://puc.paonline.com/electric/competition/calpacl.ppt	PSC http://www.dps.state.ny.us/yourenergy.htm NYSEDA http://www.nyserda.org/programs.html	PUC – detailed information on implementation http://www.puc.state.tx.us/electric/projects/20970/20970.cfm http://www.texaschoiceprogram.com Great guide to ERCOT http://www.texaschoiceprogram.com/documentation/MarkPartDocs/ERCOT_Market_Guide.doc